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## NOTES ON THE FLORA OF BOOTHBAY, MAINE.

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THE coast of Maine between Casco Bay and Penobscot Bay is cut into a series of long narrow peninsulas, separated by a series of fiord-like inlets, probably due to glacial erosion. The town of Boothbay, in Lincoln County, about twenty-five miles southeast of Bath, is at the southern, *i. e.*, the seaward, end of one of these peninsulas. The most southern part of the town consists of Linekin Neck, a piece of land three miles long and varying in width from a few rods to a mile. At the end of Linekin Neck is the summer colony of Ocean Point, and off Ocean Point lie several islands. A few of these may be mentioned in some detail. A mile south of Ocean Point is Fisherman Island, a mile long and only a few rods wide, lying almost due north and south. It rises to a height of forty feet above sea level, and is used as a pasture for cattle. It is almost treeless, and records show that it has been so for at least two centuries. A mile and a half south of Fisherman Island is Damiscove Island, which is a mile and a half long, with the same proportions and orientation as its neighbor to the north. Thirty years ago the northern end of Damiscove was wooded, but it is now bare, and used for sheep pasturage. At about the middle of the island there is a pond a quarter of a mile long, separated from the sea only by a narrow beach. The seaward end of this pond is somewhat brackish, but the landward end is a Sphagnum bog, with Vaccinium macrocarpon, Eriophorum tenellum, and E. virginicum. It is remarkable, however, that in this same bog grows Juncus balticus, var. littoralis. This pond, and other brackish pond-holes on the island, will probably yield several interesting species with thorough botanizing.

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One mile east of Damiscove Island is Outer Heron Island, which is not settled, except for some cabins occasionally used by fishermen, and cattle are pastured upon it. This island is to a large extent wooded. A mile and a half to the southward is Pumpkin Island, a small green treeless dome rising forty feet above the waves.

A few species collected by the writer on this archipelago and on Ocean Point seem worth recording. Most of the plants are represented by specimens in the Herbarium of the New England Botanical Club; figures in parentheses refer to the collector's number on the sheets so filed.

JUNIPERUS HORIZONTALIS Moench. Not common. One small shrub in an exposed field on Fisherman Island (260), one shrub in a similar situation on Outer Heron Island (258), and one in an open field half a mile from the shore at Ocean Point (259). Also reported from Pumpkin Island.<sup>1</sup>

RUPPIA MARITIMA L., var. LONGIPES Hagström; Fernald & Wiegand, RHODORA xvi. 125 (1914). New to Lincoln County; not previously represented in the Herbarium of the New England Botanical Club between Mt. Desert and the Kennebec River. Occurs on Outer Heron Island (264) in a pool of brackish water perhaps two rods from the sea, and in a similar situation on Damiscove Island (407). TRIGLOCHIN PALUSTRIS L. New to Lincoln County; previously not represented between Matinicus Island and Wells Beach. In the same pool as the preceding on Outer Heron Island (257), and on the shores of the pond on Damiscove Island (405).

PUCCINELLIA MARITIMA (Huds.) Parl.; Fernald & Weatherby, RHODORA xviii. 6 (1916). On a small patch of salt marsh, Ocean Point (412), and on Squirrel Island, a mile to the eastward. Previously not known in Maine east of Cumberland Foreside.

CAREX UMBELLATA Schkuhr. Ocean Point (233). New to Lincoln County.

ARCEUTHOBIUM PUSILLUM Peck. Abundant on *Picea canadensis* at Outer Heron Island (404) and Ocean Point. Usually confined to the border of the forest along the sea margin, controlled perhaps by moisture in the air.

CHENOPODIUM ALBUM L. (413) and SONCHUS OLERACEUS L. (2304). At Ocean Point these species grow on the cobblestone beach, where there is scarcely any soil, and make a luxurious development. *Cheno-*

<sup>1</sup> Norton, RHODORA XV. 138 (1913).

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podium grows 1.5 meters high, and Sonchus attains a height of 2 meters. This is apparently due to the dilute salts from the ocean spray, and to the fertilizing effect of dead eel-grass and sea-weeds.

FRAGARIA VIRGINIANA Duchesne, var. TERRAE-NOVAE (Ryd.) Fernald & Wiegand. Occasional on Outer Heron Island (401), and at Ocean Point (430).

RUBUS ANDREWSIANUS Blanchard. Ocean Point (826). In Maine previously known only from Orono and from Rockport.<sup>1</sup>

RUBUS JACENS Blanchard. Ocean Point (499). Previously known in Maine only from York County, and approached by material from Oldtown.

COELOPLEURUM LUCIDUM (L.) Fernald, forma FRONDOSUM Fernald. Occasional at Ocean Point.

MERTENSIA MARITIMA (L.) S. F. Gray. Stony beach, Damiscove Island (409). In 1920 this species was growing in crevices in the rocks at Ocean Point; in 1923 I could not find it at this locality.

EUPATORIUM PERFOLIATUM L., forma truncatum (Muhl.) n. comb. E. truncatum Muhl. in Willd. Sp. Pl. iii. 1751 (1804). E. salviaefolium Sims, Bot. Mag. 2010 (1818). E. perfoliatum, var. truncatum Gray, Syn. Fl. N. Am. i. pt. 2: 99 (1884). Occurs occasionally with the typical form at Ocean Point.

EUPATORIUM PERFOLIATUM L., forma trifolium, n. f., foliis ternatis connatis sicut apud formam typicam vel liberis sicut apud formam truncatum saepe oppositis vel in ramis alternis.

Leaves in whorls of 3's, connate as in the typical form or distinct at the base as in forma truncatum, often opposite or alternate on the secondary axes.—QUEBEC: tidal shores of the St. Lawrence River, St. Augustin, August 7, 1923, Svenson & Fassett, no. 2051. MAINE: tidal shores of the Kennebec River, Bowdoinham, August 24, 1921, N. C. Fasselt, no. 343; Ocean Point, September 8, 1921, N. C. Fassett, no. 346. MASSACHUSETTS: Needham, August 22, 1886, Ella M. Fuller (TYPE in Herb. New England Botanical Club). Professor J. F. Collins records having found this form,<sup>2</sup> saying:

"The leaves of each whorl were united about the stem much as in the usual form, except that there was a superfluity of tissue at the points of contact, thus making the bases of the leaves crispate." This is often the case, although the leaves are sometimes free from each other at the base.

<sup>1</sup>C. A. E. Long, RHODORA, XXIV. 181 (1922). <sup>2</sup> Bot. Gaz. xi. 341 (1886).

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In a clump of E. perfoliatum growing on the estuary of the Kennebec River, there were several stems arising in one clump; one was forma trifolium, a second had five solitary leaves, one set of two leaves at an angle of 120 degrees, and five pairs of opposite leaves, while the rest of the stems in this clump bore normal foliage. Near the specimen collected at Ocean Point was an individual which had the leaves alternate, connected by a broad wing spiraling about the stem.

ASTER LONGIFOLIUS Lam., var. VILLICAULIS Gray. A few plants in a thicket at Ocean Point (429). This appears to be the first collection in Maine on the coast.

BIDENS FRONDOSA L., VAR. ANOMALA Porter. Abundant at Ocean Point along the shore, on cobblestone beaches or in crevices in the rocks. Also at Squirrel Island (408) where it is sometimes found with the typical form of the species. Previously reported in Maine only on the tidal reaches of the Androscoggin River. I have seen it on rocky shores bordering salt water at Woolwich. GRADUATE SCHOOL OF ARTS AND SCIENCES, Harvard University.

### FOURTH REPORT OF THE COMMITTEE ON FLORAL AREAS.

Our previous reports (Rнодока xx. 181-185, 193-197; xxii. 80-89; xxiii. 209-220) have dealt with pteridophytes and with a family of flowering plants, the Ranunculaceae, most of the New England members of which are spring-flowering, woodland species. It was felt that, this time, it might be of interest to consider a group of summer- and fall-flowering plants; and the early genera of the Compositae, through Solidago, were accordingly chosen.

In nomenclature, we have followed Prof. Wiegand's revision of the verticillate Eupatoria. We have taken up the earlier names Solidago suaveolens and S. humilis in place of S. odora and S. uliginosa, and, following Prof. Fernald, have treated S. aspera and S. neglecta of the Manual as varieties of S. rugosa and S. uniligulata respectively. One minor variety has been reduced to formal rank (following Mr.

Fassett) and four (Solidago Randii, var. monticola, S. juncea, var. scabrella, and the two varieties of S. caesia) have been omitted altogether as hardly deserving of any recognition. Otherwise, the Manual names stand unchanged—plus species and varieties recognized or detected within our area since 1908. As before, varieties which